REMARKS/ARGUMENTS

Reconsideration of this application is respectfully requested.

The rejection of claims 1 and 45 under 35 U.S.C. §102 as allegedly anticipated by Ni '074 is respectfully traversed.

Applicant's independent claim 1 requires, *inter alia*, a packaging layer provided with at least one recess for use in assembling at least one optical component and at least one different component for assembled functional use. That is, the applicant's packaging layer provides at least one recess into which a component is inserted.

By contrast, Ni teaches formation of "pixels 302 and cathode separators 303" onto an anode layer 304 supported by substrate 301 – as shown in Fig. 3A. A cathode layer 305 is applied separately to the top of each of the components 302, 303 as also shown in Fig. 3A.

After such plural components are formed, a passivation layer 306 is applied so as to fill up the gap between the components 302, 303. On top of this now planarized structure, a dielectric layer 307 and an upper metallic layer are then applied (e.g., see Fig. 3C of Ni).

A final "package material" 309 layer is then applied to overlie the entire assembled electroluminescent structure (e.g., see Fig. 3D of Ni).

The Examiner's attempt to support the allegation of anticipation has required the Examiner to erroneously paraphrase the applicant's actual claim language so as to avoid dealing with the requirement that the packaging layer must be provided with at least one recess for use in assembling the components. In fact, the "packaging" layer in Ni is a planar uninterrupted layer 306 (or "polymer package layer 210" in Fig. 2 or "polymer package layer 109" in Fig. 1 of Ni). It has no recess at all.

Furthermore, in Ni, the organic metallic material or layer 106 (Fig. 1) or "passivation layer 206" (Fig. 2) or "passivation layer 306" (Figs. 3B-3D) are all formed after the components have already been assembled in place so as to fill up the gaps therebetween, among other functions. However, Ni's layers 106, 206 and/or 306 clearly are not provided with at least one recess for use in assembling components thereinto.

The Examiner completely mischaracterizes multiple layers 206, 208 and 209 as "a packaging layer" whereas actually, as described by Ni, the only "packaging layer" would be the planarized uninterrupted layer 210 (Fig. 2) having no recess therein whatsoever under any possible interpretation.

Furthermore, the Examiner's assertion that the alleged "packaging layer" comprises a "glass material having both organic and inorganic components" is believed to be clearly erroneous. The Examiner relies upon paragraphs [0033] and [0041] of Ni in this regard. However, the word "glass" does not appear anywhere in these paragraphs and it is unclear to the undersigned that the described materials qualify as "glass". In any event, Ni surely does not teach a hybrid glass packaging layer as claimed by the applicant (see below).

If the Examiner believes that there is actually a teaching of hybrid glass material having both organic and inorganic components somewhere in Ni, then it is requested that the Examiner particularly point out exactly where there is such teaching.

The Examiner also relies upon paragraph [0045] of Ni to support an allegation that Ni's "packaging layer" is provided with at least one recess ("cavities and protrusions") for use in assembling components. Actually, if one reads paragraph [0045], one will discover that as previously explained, Ni is there discussing an assembly process wherein the components are first assembled in place and only later is a "passivation layer 306" inter-filled in and around and between all of the already assembled components. The phrase "cavities and protrusions" referred to in this paragraph relates to

the interstices between the already assembled components – not to any cavities and protrusions in an earlier formed packaging layer for use in assembling components thereinto. The Examiner's attempt to find support here for the alleged anticipation of applicant's claim 1 is clearly erroneous – and actually contrary to the Ni teaching.

Although clearly not required to overcome any teaching or suggestion of Ni, claim 1 has been amended so as to now require a hybrid glass material. Hybrid glasses are a known type of material which can be formed from various combinations of inorganic oxides and polymers. The inorganic oxides are covalently bonded to the organic polymers to provide a single material without interfaces.

Ni does not disclose a hybrid glass material, but instead a polymer material containing grains of an inorganic filler material. This can be seen, for example, in paragraph [0033] of Ni where the grain size is given in the approximate range of 0.1 mm to 10 µm. The cited paragraph [0033] refers clearly to a filler agent and a polymer material. There will be an interface around every grain of inorganic filler, and between the filler material and the polymer material.

The rejection of claims 1, 14, 21-23, 29, 38-42 and 45 under 35 U.S.C. §103 as allegedly being made "obvious" based on Lebby '760 is also respectfully traversed.

Although Lebby does disclose an integrated electro-optical package and methodology for its fabrication, the "molded optically opaque mounting structure 72" having therein "central portions 74 and/or central openings (not shown)" is explicitly described as "molded plastic". Furthermore, Fig. 6 of Lebby shows a dual-sided opto-electronic device 10" as somehow being positioned within (i.e., embedded within) at least a portion of the molded mounting structure 72.

Fig. 6 in Lebby is described at 10:43-61 as showing a *"dual-sided opto-electronic device 10"...positioned within a molded optically opaque mounting structure 72."* The

mounting structure 72 is *"formed as a carrier ring-like structure of opaque material, such as molded opaque plastic, resin or other material suitable for the purposes stated herein."*

The mounting structure 72 is not a layer such as the packaging layer of applicant's claim 1 – e.g., because it provides a significantly different function. For example, structure 72 is a mounting structure, carrying as it does *"a plurality of driver and control circuits 68'"* as described at 11:19-20 of Lebby. Structure 72 is certainly not carried by a substrate that also carries assembled components on the same substrate. It is the mounting structure 72 itself which does the carrying – of components mounted thereon.

Here, the Examiner has already recognized that Lebby does not disclose a packaging layer comprising a glass material having both organic and inorganic components. To supply this admitted deficiency, the Examiner relies upon Iha.

However, in Iha, a photosensitive borosilicate glass is used as an insulating material, for example, for multilayer interconnected printed circuit board constructions. The glass can be printed to create fine vias for electrical connection between the layers. The particular glass disclosed in Iha is advantageous because it can be treated at higher temperatures than previously used materials, without softening. When there is softening, there tends to be a degradation in insulative properties of the previously used glasses, for example, caused by diffusion of silver material of conductive leads in the vias. The previously known glass materials also tend to shrink during sintering, leaving oversized vias.

There is no teaching in Iha that would lead one to think the glass materials would be useful as mounting structures such as the mounting structure 72 of Lebby. There is no indication that one could mold them. The problems referred to in paragraph [0019] of Iha, apart from gelation, relate very specifically to the use of the glass as an insulator

in printed circuitry. The problem of gelation arises only in the context of glass pastes previously used in printed circuitry.

Further, even if the Lebby mounting structure 72 is, *arguendo*, made of Iha's glass material(s), one is still left with deficiencies as noted above.

Given such fundamental deficiencies of both cited references with respect to aspects already discussed with respect to independent claim 1, it is not necessary at this time to detail further deficiencies of this allegedly "obvious" combination of references with respect to other aspects of the rejected claims. Suffice it to note that, as a matter of law, it is impossible to support even a *prima facie* case of "obviousness" unless the cited art teaches or suggests each and every feature of the claimed invention.

Accordingly, this entire application is now believed to be in allowable condition, and a formal notice to that effect is earnestly solicited.

Respectfully submitted,

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